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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/687,524	10/12/2000	William E. Bernier	END-00-0034US1	1044

7590 09/11/2002

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EXAMINER	
JOHNSON, JONATHAN J	

ART UNIT	PAPER NUMBER
1725	8

DATE MAILED: 09/11/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/687,524	Applicant(s) BERNIER ET AL.	
	Examiner Jonathan Johnson	Art Unit 1725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 July 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33* is/are pending in the application.

4a) Of the above claim(s) *12-22,26 and 29-32* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11,23-25,27,28 and 33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-33* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Response to Amendment

Applicant's Amendments and accompanying remarks submitted as Paper No. 7 on 7-17-02 have been entered and carefully considered.

Claim Objections

The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claim 29 been renumbered 33.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-8, 10-11, 24-25, and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pendse (6,059,894) in view of Marshall, Jr. (4,491,084). Pendse teaches

providing a solderable surface having a tin oxide thereon (Column 4, Lines 20-45); applying a complexing agent to the solderable surface (Column 5, Lines 1-10); forming a reaction product with the tin oxide and the complexing agent, wherein the reaction product decomposes to tin oxide and volatile products upon being exposed to reflow conditions (Column 3, Lines 50-60). Marshall, Jr. teaches the desirability to store the protected surface for later reflow (Column 4, lines 20-45). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the process of Pendse to utilize cooling and storing the protected surface in order to have components available for future use (see Marshall, Jr. Column 4, Lines 25-35).

With respect to Claim 2, the teachings of Pendse and Marshall, Jr. are the same as relied upon in the rejection of Claim 1. Pendse teaches forming a reaction product with tin (Column 4, Lines 25-30).

With respect to Claim 4, the teachings of Pendse and Marshall, Jr. are the same as relied upon in the rejection of Claim 1. Pendse teaches forming the reaction product with the tin oxide and the complexing agent comprises heating (Column 4, lines 20-30).

With respect to Claim 6, the teachings of Pendse and Marshall, Jr. are the same as relied upon in the rejection of Claim 1. Pendse teaches the complexing agent comprises pimelic acid (Column 5, Line 3).

With respect to Claim 7, the teachings of Pendse and Marshall, Jr. are the same as relied upon in the rejection of Claim 1. Pendse teaches the complexing agent comprises a flux (Column 4, Lines 10-65).

With respect to Claim 8, the teachings of Pendse and Marshall, Jr. are the same as relied upon in the rejection of Claim 1. Pendse teaches the complexing agent comprises sebacic acid (Column 5, Lines 1-6).

With respect to Claim 24, the teachings of Pendse and Marshall, Jr. are the same as relied upon in the rejection of Claim 1. Pendse teaches the the complexing agent comprises adipic acid (Column 5, Lines 1-10).

Claims 1 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arldt et al. (5,531,838) in view of Marshall, Jr. (4,491,084). Arldt et al. teaches providing a solderable surface having a tin oxide thereon (Column 5, Lines 1-10, Column 4, Column 2, Lines 15-30); applying a complexing agent to the solderable surface (Column 5, Lines 1-30); forming a reaction product with the tin oxide and the complexing agent, wherein the reaction product decomposes to tin oxide and volatile products upon being exposed to reflow conditions (Column 1, Lines 15-30); wherein the complexing agent consists of pimelic acid (Column 3, Line 25-40). Marshall, Jr. teaches the desirability to store the protected surface for later reflow (Column 4, lines 20-45). It would have been obvious to one of ordinary skill in the art at the time of the

invention to modify the process of Arldt et al. to utilize cooling and storing the protected surface in order to have components available for future use (see Marshall, Jr. Column 4, Lines 25-35).

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pendse and Marshall, Jr. as applied to claim 1 above and further in view of Gao et al. (5,514,414). Gao et al. teaches the complexing agent comprises vapor phase deposition (abstract). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Pendse to apply the flux without the use of volatile organic chemicals (see Gao et al. abstract).

Response to Arguments

Applicant argues that Pendse does not teach the limitation of volitization of tin carboxylates under reflow conditions. The examiner disagrees. Pendse teaches the use of the same acids under reflow conditions similar to the instant invention. Therefore, the volitization of the carboxylates would be inherent to the process of Pendse. When the examiner has reason to believe that functional language asserted to be critical for establishing novelty in claimed subject matter may, in fact be an inherent characteristic of the prior art, the burden of proof is shifted to the applicant to prove that the subject matter shown in the prior art does not possess the characteristics relied upon. *In re Fitzgerald et al.* 205 USPQ 594.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the reaction product decomposes to only tin oxide and volatile products) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the

specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Johnson whose telephone number is 703-308-0667. The examiner can normally be reached on M-Th 7AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on 703-308-3318. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

jj
August 30, 2002

TOM DUNN
SUPERVISORY PATENT EX[illegible]ER
TECHNOLOGY CENTER 1[illegible]